

## COMPOSITIONS FOR ACHIEVING A THERAPEUTIC EFFECT IN AN ANATOMICAL STRUCTURE AND METHODS OF USING THE SAME

Wouter E. Roorda  
Stephen D. Pacetti

### ABSTRACT

5 Compositions and methods of using the compositions to achieve a therapeutic effect are provided. The compositions include a particle suitable for introduction into an anatomical structure and capable of reducing in size. In some embodiments, the particle contains a therapeutic substance and is capable of embolizing within the lumen for a transitory period of less than one week. The therapeutic substance is released from the particle as the particle reduces in size. In other embodiments, the particle is capable of embolizing within the lumen for a transitory period, causing a brief period of reduced blood flow which induces a therapeutic bodily response.

10 One method of achieving a therapeutic effect includes providing a particle containing a therapeutic substance to an anatomical structure having a lumen such that the particle embolizes within the lumen for a transitory period of less than one week. The therapeutic substance is released from the particle as the particle reduces in size, causing a therapeutic effect. Another method includes providing a particle to an anatomical structure having a lumen such that the particle embolizes within the lumen for a transitory period. The transitory period of embolization causes a brief period of reduced blood flow through the lumen that induces a therapeutic bodily response.

20 Also provided is a method of achieving a therapeutic effect within an anatomical structure having a first region as well as a second region located downstream of the first region and having a smaller cross-sectional diameter than the first region.